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EXAMINER

ALEJANDRO, RAYMOND

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,904

Applicant(s)

AGIZY ET AL.

Examiner

Raymond Alejandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 and 6-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 03/03/04 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 03/03/04 was considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-14 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al 5560985.

With reference to claims 1, 14 and 20:

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Watanabe et al disclose a molding sheet material (ABSTRACT/COL 4, lines 35-50) wherein the sheet material is used in the molding of a molded article of a fiber reinforced thermoplastic resin (COL 6, lines 16-40).

Watanabe et al disclose that the molding sheet is characterized by having a structure consisting of a core layer of a fiber reinforced thermoplastic resin reinforced with a random mat of a reinforcing fiber (COL 3, lines 40-47) wherein the reinforcing fiber is usually in the range of from 30-70 % by weight, particularly preferably in the range of from 50-65 % (COL 3, line 65 to COL 4, line 3). It is disclosed that the reinforcing mat used therein may be in the form of a nonwoven fabric such as a glass fiber (COL 4, lines 4-20) wherein the fiber length is preferably in the range of from ½ in to 4 in (that is, 12.7 mm to 101.6 mm) (COL 4, lines 5-23).

Watanabe et al also teach that examples of resin matrix constituting the core layer include polyamide and polyphenylene sulfide, among others, and polyphenylene sulfide being preferred (COL 4, lines 23-34).

It is disclosed that there is no particular limitation on the applications of molded articles, that is, the molded articles may be used in any application and is particularly favorable for applications where deep drawing and a high strength are required (COL 6, lines 31-40).

Examiner's note: *as to the specific preamble reciting "fuel cell endplate", it is pointed out that the preamble refers to intended use. That is, the claim is directed to a plate per se and the preamble phrase fuel cell endplate is only a statement of ultimate intended utility. In this instance, it is further contended that the molded article which is a molding sheet may acts as plate itself.*

As to claim 2:

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Figure 8 exemplifies the use of glass fiber diameter at least from about 10 to 15 μm (FIGURE 8). In addition, it is disclosed that glass fiber diameters can range from 9-13 μm (COL 7, lines 45-47/ COL 12, lines 55-60). *Thus, the exemplified diameter range of glass fiber in Figure 8 represents that Watanabe et al teaches the claimed diameter range with sufficient specificity.*

Regarding claim 3:

Watanabe et al, above all, disclose that it is particularly preferably that the weight content of the glass fiber be about 40 % (COL 4, lines 10-15) as well as from 40-50 % by weight (COL 12, lines 55-60). EXAMPLE 1 shows the use of 60 % by weight of glass fiber while COMPARATIVE EXAMPLE 3 shows the use of 45 % of glass fiber (EXAMPLES 1 and COMPARATIVE EXAMPLE 3). It is also disclosed that the molded sheet material has a glass content of 45 % (COL 12, lines 4-10). *Thus, the glass fiber weight content is disclosed with sufficient specificity.*

Concerning claim 4:

It is disclosed that the fiber length is preferably in the range of from $\frac{1}{2}$ in to 4 in (that is, 12.7 mm to 101.6 mm) (COL 4, lines 5-23). *In this case, it is noted that, at least, the end point constitutes a valid date point and thus it anticipates the claim as the end point represents a specific disclosure of a discrete embodiment of the invention disclosed by the prior art which amounts to a complete description and, therefore, an anticipation of the claimed range. See Ex Parte Lee 31 USPQ2d 1105.*

As to claim 6:

Figure 8 exemplifies the use of glass fiber diameter at least from about 10 to 15 μm (FIGURE 8). *Thus, the exemplified diameter range of glass fiber in Figure 8 represents that Watanabe et al teaches the claimed diameter range with sufficient specificity. Moreover, in this case, at least the end point (i.e. 15 μm) constitutes a valid date point and thus it anticipates the claim as the end point represents a specific disclosure of a discrete embodiment of the invention disclosed by the prior art which amounts to a complete description and, therefore, an anticipation of the claimed range. See Ex Parte Lee 31 USPQ2d 1105.*

Regarding claims 7 and 9:

Watanabe et al also teach that examples of resin matrix constituting the core layer include polyphenylene sulfide, among others, and polyphenylene sulfide being preferred (COL 4, lines 23-34).

With reference to claim 8:

EXAMPLE 1 shows the use of 60 % by weight of glass fiber while (EXAMPLE 1). *Hence, the glass fiber weight percent is taught with sufficient specificity.*

As to claim 10:

As to the method limitation, i.e. "the pultrusion technique", it is noted that a method limitation incorporated into a product claim does not patentably distinguish the product because what is given patentably consideration is the product itself and not the manner in which the product was made. Therefore, the patentability of a product is independent of how it was made.

Regarding claim 11:

Watanabe et al teach the production of a molded article (COL 6, lines 16-40/ COL 4, lines 35-55/ COL 4, line 47-52/ COL 6, line 1-3/ COL 8, lines 37-50/ COL 8, lines 3-8).

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Concerning claims 12-13:

Given that Watanabe et al disclose that specific glass fiber diameter of claim 2 and the specific glass fiber weight content of claim 3, it is thus contended that the claimed creep resistance is simply an inherent property or characteristic of the composite material. *Accordingly, products of identical chemical composition can not have mutually exclusive properties, and thus, the claimed property (i.e. the calculated creep resistance), is necessarily present in the prior art material.*

As far as claim 14:

Watanabe et al disclose the particular use of polyphenylene sulfide (COL 4, lines 23-34); and the specific glass content of 45 % by weight (COMPARATIVE EXAMPLE 3/ COL 12, lines 4-6/ COL 7, lines 39-45). In addition, it is also disclosed that the glass weight content is preferably in the range of from about 40 to 50 % by weight (COL 6, lines 28-32). *In this case, at least the end point (i.e. 50 %) constitutes a valid date point and thus it anticipates the claim as the end point represents a specific disclosure of a discrete embodiment of the invention disclosed by the prior art which amounts to a complete description and, therefore, an anticipation of the claimed range. See Ex Parte Lee 31 USPQ2d 1105.*

It is disclosed that the fiber length is preferably in the range of from ½ in to 4 in (that is, 12.7 mm to 101.6 mm) (COL 4, lines 5-23). *In this case, it is noted that, at least, the end point (i.e. 12.7 mm) constitutes a valid date point and thus it anticipates the claim as the end point represents a specific disclosure of a discrete embodiment of the invention disclosed by the prior art which amounts to a complete description and, therefore, an anticipation of the claimed range. See Ex Parte Lee 31 USPQ2d 1105.*

Figure 8 exemplifies the use of glass fiber diameter at least from about 10 to 15 μm (FIGURE 8). *Thus, the exemplified diameter range of glass fiber in Figure 8 represents that Watanabe et al teaches the claimed diameter range with sufficient specificity. Moreover, in this case, at least the end point (i.e. 15 μm) constitutes a valid date point and thus it anticipates the claim as the end point represents a specific disclosure of a discrete embodiment of the invention disclosed by the prior art which amounts to a complete description and, therefore, an anticipation of the claimed range. See Ex Parte Lee 31 USPQ2d 1105.*

As to claim 19:

Watanabe et al further disclose that the composite may also include a binder which can enhance the impregnating ability of the resin and the adhesion to the resin (COL 5, lines 28-35). *Thus, the binder serves as a processing aid or stabilizer or lubricant.*

As for as claim 20:

Watanabe et al disclose the particular use of polyphenylene sulfide (COL 4, lines 23-34); and glass fibers (COMPARATIVE EXAMPLE 3/ COL 12, lines 4-6/ COL 7, lines 39-45). Above all, it is disclosed that it is particularly preferably that the weight content of the glass fiber be about 40 % (COL 4, lines 10-15) as well as from 40-50 % by weight (COL 12, lines 55-60). EXAMPLE 1 shows the use of 60 % by weight of glass fiber while COMPARATIVE EXAMPLE 3 shows the use of 45 % of glass fiber (EXAMPLES 1 and COMPARATIVE EXAMPLE 3). It is also disclosed that the molded sheet material has a glass content of 45 % (COL 12, lines 4-10). *Thus, the glass fiber weight content is disclosed with sufficient specificity.*

It is further taught that the fiber length is preferably in the range of from $\frac{1}{2}$ in to 4 in (that is, 12.7 mm to 101.6 mm) (COL 4, lines 5-23). *Thus, the glass fiber length is at least 5 mm.*

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Thus, the claims are anticipated by Watanabe et al.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al 5560985 as applied to claims 1 and 3 above, and further in view of Lawrence 4214969.

Watanabe et al are applied, argued and incorporated herein the reasons set forth above. However, the preceding prior art does not expressly disclose the specific fuel cell endplate assembly.

Lawrence reveals electrochemical cells wherein the endplates 1 and 2 are both molded of aggregates of a thermoplastic resin (COL 3, lines 60-67).

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In view of the above, it would have been obvious to one skilled in the art at the time the invention was made to make the specific fuel cell endplate assembly of Lawrance by using the specific glass fiber reinforced thermoplastic resin composition of Watanabe et al as Lawrance disclose that such end plates when use in end plate assemblies provide excellent corrosion resistance to a variety of feed stocks and to various electrochemical products.

Allowable Subject Matter

8. The indicated allowability of claims 1-4 and 6-20 is withdrawn in view of the newly discovered references as seen above. Rejections based on the newly cited reference(s) has been set forth in the immediately preceding paragraphs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond Alejandro
Examiner
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A handwritten signature in black ink, appearing to read 'RAM', followed by a long, sweeping horizontal line that extends to the right.